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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,195	04/17/2006	Naoki Hayashida	288805US0PCT	8714
22850	7590	07/30/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER BERMAN, SUSAN W	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			07/30/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/576,195	<b>Applicant(s)</b> HAYASHIDA ET AL.	
	<b>Examiner</b> /Susan W. Berman/	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4-17-06, 7-17-06, 10-11-07, 2-1-08</u>                        | 6) <input type="checkbox"/> Other: _____                          |



### ***Election/Restrictions***

Applicant's election with traverse of Group I, claims 1-12, in the reply filed on 05-21-2008 is acknowledged. The traversal is on the ground(s) that no adequate reasons and/or examples have been provided to support a conclusion of patentable distinctiveness and it has not been shown that a burden exists in searching the two groups. This is not found persuasive for the following reasons. The restriction requirement under 35 USC 121 and 372 is made because the inventions of the two groups are not linked by a special technical feature providing a single inventive concept to the two groups of claims. Although both groups of claims recite the composition of Group I, the composition is not considered to be a special technical feature because coating compositions comprising fluorine-containing polyether compounds having a urethane bond and active energy ray curable groups are known in the art. See EP 0379462 and EP 1057849 cited in the International search report of record. Furthermore, applicant has not provided evidence of or admitted on the record that the different groups of claims are obvious variants.

The requirement is still deemed proper and is therefore made FINAL.

### ***Specification***

The abstract of the disclosure is objected to because it is not printed on a separate page. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: several names of various chemicals are run together resulting in misleading nomenclature, such as “triethyleneglycoldi (meth)acrylate” for triethyleneglycol di(meth)acrylate on page 13.

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Applicant is advised to check all named chemicals. The trademarked materials on page 22 are not capitalized.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 807 136 B1. EP '136 discloses radiation curable compositions comprising fluorinated urethane oligomers based on fluorinated polyethers endcapped with ethylenically unsaturated groups. See paragraphs [0009] and [0012].

Claims 1 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1 057 849 A2. See the Abstract, Paragraphs [0009], [0010], [0022] and Examples 1-5.

Claims 1 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Turri (6,376,572). Turri discloses analogous compositions comprising an acrylated perfluoropolyether containing urethane bonds and derived from a fluoropolyether diol.

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Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 03/002628, as disclosed in US Pub. 2004/181008. With respect to claims 1, 2 and 4, WO '628 discloses compositions comprising 0.2 to 2% fluorine-containing polymer containing urethane bond and two acrylate groups. With respect to claim 3, WO '628 also teaches compositions comprising 69% dipentaerythritol hexaacrylate and 31% triethyleneglycol diacrylate. With respect to claims 5-7, see Application Examples 1-4.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriyama et al (6,160,067) in combination with WO 03/002628, as disclosed in US 2004/181008. The disclosure of WO '628 is discussed above. Eriyama et al disclose reactive silica particles for producing coatings having excellent scratch resistance, weather resistance, adhesiveness and curability, as well as transparency. See column 13, line 47, to column 15, line 7, column 16, lines 26-44, column 17, lines 33-44, and Examples 8-9. Eriyama et al teach compositions comprising the reactive silica particles, polyacrylate monomers, photoinitiators and urethane (meth)acrylates of formula (4) that can be based upon polyether diols.

It would have been obvious to one skilled in the art at the time of the invention to employ a perfluoropolyether diol, as taught by WO '628 in analogous coating compositions, to prepare a urethane (meth)acrylate based on polyether diol for use in the compositions disclosed by Eriyama et al. Eriyama et al provide motivation by teaching that the urethane (meth)acrylates useful in the disclosed compositions can be based on polyether diols. One skilled in the art at the time of the invention would have been motivated by a reasonable expectation of successfully providing a useful hardcoat composition, as disclosed by Eriyama et al and also incorporating the properties of perfluoropolyether urethane acrylates taught by WO '628.

Alternatively, It would have been obvious to one skilled in the art at the time of the invention to employ the silica particles taught by Eriyama et al in the surface-treating composition disclosed by WO '628 in order to improve the wear resistance of the coatings. One skilled in the art at the time of the invention would have been motivated by a reasonable expectation of providing a useful composition for producing a hardcoat, as taught by Eriyama et al.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriyama et al (6,160,067) in combination with Turri (6,376,572). Eriyama et al disclose reactive silica particles for producing coatings having excellent scratch resistance, weather resistance, adhesiveness and curability, as well as transparency. See column 13, line 47, to column 15, line 7, column 16, lines 26-44, column 17, lines 33-44, and Examples 8-9. Eriyama et al teach compositions comprising the reactive silica particles, polyacrylate monomers, photoinitiators and urethane (meth)acrylates of formula (4) that can be based upon polyether diols.

Turri discloses analogous compositions comprising an acrylated perfluoropolyether containing urethane bonds and derived from a fluoropolyether diol.

It would have been obvious to one skilled in the art at the time of the invention to employ a perfluoropolyether diol, as taught by Turri in analogous coating compositions, to prepare a urethane (meth)acrylate based on polyether diol for use in the compositions disclosed by Eriyama et al. Eriyama et al provide motivation by teaching that the urethane (meth)acrylates useful in the disclosed compositions can be based on polyether diols. Turri provides motivation by teaching that the acrylated perfluoropolyethers containing urethane bonds provide good surface pick-up properties, hardness, abrasion resistance and chemical resistance to coating compositions. One skilled in the art at the time of the invention would have been motivated by a reasonable expectation of successfully providing a useful hardcoat composition, as disclosed by Eriyama et al and also incorporating the properties of perfluoropolyether urethane acrylates taught by Turri.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al (7,074,472) in view of Turri (6,376,572) or WO '628. Itoh et al disclose the invention as claimed except for teaching that the fluorine-containing polyether can be a fluoropolyether having a urethane bond. Turri and WO '628 each discloses analogous compositions comprising a perfluoropolyether having acrylate functional groups that can also contain urethane bonds.

It would have been obvious to one skilled in the art at the time of the invention to substitute the urethane bond containing perfluoropolyether acrylates disclosed by Turri or WO '628 in analogous compositions for the perfluoropolyether acrylates in the compositions claimed



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by '472. Turri provides motivation by teaching that the acrylated perfluoropolyethers containing urethane bonds are equivalent to acrylated polyfluoropolyethers for providing good surface pick-up properties, hardness, abrasion resistance and chemical resistance to coating compositions.

WO '628 provides motivation by teaching compositions for surface-treating. One skilled in the art at the time of the invention would have been motivated by a reasonable expectation of successfully providing a hardcoat composition, as claimed by US '472, incorporating the properties of urethanated perfluoropolyethers taught by Turri or WO '628.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 7,074,472 in view of Turri (6,376,572) or WO ‘628. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. The difference is that the claims of ‘472 recite a fluorine-containing polyether but do not recite a fluoropolyether having a urethane bond. Turri and WO ‘628 each discloses compositions comprising a perfluoropolyether having acrylate functional groups that can also contain urethane bonds. It would have been obvious to one skilled in the art at the time of the invention to substitute the urethane bond containing perfluoropolyether acrylates disclosed by Turri or WO ‘628 in analogous compositions for the perfluoropolyether acrylates in the compositions claimed by ‘472. Turri provides motivation by teaching that the acrylated perfluoropolyethers containing urethane bonds are equivalent for

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providing good surface pick-up properties, hardness, abrasion resistance and chemical resistance to coating compositions. WO '628 provides motivation by teaching that the perfluoropolyethers are useful for surface-treating compositions. One skilled in the art at the time of the invention would have been motivated by a reasonable expectation of successfully providing a hardcoat composition, as claimed by US '472, incorporating the properties of urethanated perfluoropolyethers taught by Turri.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Newell et al (4,508,916) disclose urethane acrylates having fluorinated polyether groups in the backbone to provide coatings for optical materials. Katsamberis (5,426,131) discloses compositions comprising colloidal silica and acrylated urethanes. Baba et al (6,013,749) disclose compositions comprising reactive silica particles and polyfunctional (meth)acrylates. Lake (6,087,413) discloses clearcoat compositions comprising an acrylated aliphatic urethane derived from a polyether aliphatic urethane and a multifunctional acrylate. Flosbach et al (6,332,291) disclose coating compositions comprising urethane acrylates and metal oxides as pigments or extenders. Takase et al (7,084,187) teach compositions comprising reactive particles of metal oxides. Soutar et al (7,196,136) disclose coating composition comprising acrylated oligomers, (meth)acryloxy or vinyl functionalized silane and silica. Ko et al (5,846,650) disclose anti-reflective, abrasion resistance, anti-fogging coatings obtained from a perfluoropolyether urethane di(meth)acrylate and a fluorochemical surfactant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB  
7/19/2008

/Susan W Berman/  
Primary Examiner  
Art Unit 1796